

REMARKS/ ARGUMENTS

This amendment is in response to the Office Action of May 9, 2003. This amendment is being submitted in the revised format now authorized in the Official Gazette, 1267 OG 106, on February 25, 2003.

The specification (attached hereto) has been amended to insert the appropriate section headings before each section, to correct minor typographical errors, and to add an Abstract. The specification is marked to show the changes made. A clean version of a substitute specification is also enclosed. No new matter has been added.

Claims 18-29 are pending in this application. Claims 18, 20 and 27-29 are amended herein.

On page 3 of the Office Action, the Examiner has rejected claims 27 and 28 under 35 U.S.C. 112, second paragraph, as being indefinite. The present amendment changes the dependency of both claims to claim 26. Accordingly, it is believed that this ground of rejection has now been overcome.

On page 4 of the Office Action, the Examiner has rejected claims 18-26 and 29 under 35 U.S.C. 102(b) as being anticipated by Morgenstern U.S. Patent No. 2,706,931. Applicant respectfully disagrees.

Morgenstern shows a rear view mirror construction. Unlike the present invention, however, the frame 10 of Morgenstern is not a resilient snap-fit within the housing 1, and the housing and the frame of Morgenstern are not releasably detachable. Morgenstern at column 2, lines 3-7 clearly states that “[i]n the assembly of the head, the member 10 [i.e., the frame] is pressed into the peripheral flange 6 of the shell 5 until the inner flange 14 of the mounting member tightly engages and conforms to the shape of the shoulder 7.” This is not a snap fit. From consideration of Fig. 2 of Morgenstern, it will be seen that the flange 6 at this stage of the construction is open and the frame 10 is merely pushed into it until the flange 14 engages the shoulder 7 of the housing. Morgenstern goes on to state that “the glass mirror 25 is disposed inwardly against the web 11 within the confines of the outer flange 15....” Column 2, lines 7-9. Thus, it is clear that the outer flange 15 has not been distorted in any way by the

insertion of the frame into the housing; otherwise it would not be possible to dispose it inwardly, as stated at column 2, line 8.

In column 2, lines 11-20, Morgenstern describes how the mirror is held in place, specifically: "With the glass mirror so positioned within and protected by the mounting member, the flange 6 of the casing is formed or peened inwardly by suitable means in a gentle curve outwardly of the shoulder 7, as best shown in Fig. 4 and, as will be seen from this view, the outer edge of the flange 6, in its final position, presses the underlying portion of the flange 15 of the mounting member tightly against the edge and bevel 27 of the mirror, thereby to securely, but slightly yieldingly, hold the mirror within the casing."

From the above it will be seen that the effect of peening the flange 6 over the frame and mirror is that the frame and mirror are held in position, but once the construction has been put together, the frame is not releasably detachable, as required by amended claim 18 of the present invention. In fact, once the Morgenstern construction has been put together, it is impossible to take it apart to replace the mirror if it is broken.

Claim 20 of the present invention has been amended to clarify that the catches are releasable. The cited prior art does not teach or suggest any form of releasable catch.

Claim 23 of the present invention calls for the lens to be a resilient snap-fit in the frame. This is not shown in Morgenstern. Morgenstern clearly states that the "glass mirror 25 is disposed inwardly against the web 11 and within the confines of the outer flange 15" Column 2, lines 7-9. There is no teaching or suggestion that this glass is a snap-fit in the frame.

Applicant notes that no prior art has been applied against claim 27 or 28.

Accordingly, applicant submits that, in light of the amendments made to the claims herein, and the discussion above, the Examiner's rejections of the claims under 35 U.S.C. 112 and 102(b) have now been overcome. Thus, all of the amended claims are now believed to be allowable. Accordingly, applicant respectfully requests that a timely Notice of Allowance be issued in this case.

If there are still unresolved issues requiring adverse action, it is requested that the Examiner contact applicant's attorney so that appropriate arrangements can be made for discussing and perhaps resolving the same.

Respectfully submitted,

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[substitute specification with markings to show changes made]

VEHICLE REAR VIEW MIRROR

CROSS-REFERENCE TO RELATED APPLICATIONS

[Not Applicable]

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

[Not Applicable]

INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC

[Not Applicable]

FIELD OF THE INVENTION

This invention relates to a vehicle rear view mirror.

BACKGROUND OF THE INVENTION

In known types of rear view mirrors the mirror lens is usually carried directly on a housing which includes means to mount the mirror in position.

There are disadvantages with the constructions referred to above due to the ease with which the mirror can be broken if the mounting becomes distorted.. It can also be difficult to locate the mirror in position without some form of bead or retaining element.

SUMMARY OF THE INVENTION

The present invention is intended to overcome the difficulties referred to above and to provide a construction which is easy to assemble and which can be easily dismantled to replace a mirror lens in the housing if required.

According to the present invention a vehicle view mirror comprises a housing, a mirror lens and a location frame, said frame being adapted to carry said mirror lens and to locate it within said housing.

Thus, due to the mirror lens being carried in the frame, it is easier to fit into the housing and the possibilities of damage to the mirror lens during fitting is are reduced.

Preferably the frame is located within a rim of the housing and the frame can be a resilient snap fit.

In a preferred construction the frame is provided with engagement means to resiliently engage retaining means on the housing.

Thus, the engagement means may comprise one or more abutments adapted to be located behind one or more co-operating catches which provide said retaining means on the housing.

Preferably the abutments and/or the catches are resilient.

The mirror lens can be a resilient snap fit in the frame and the frame can be provided with one or more inner abutments adapted to retain the mirror lens in place.

The frame and/or housing can be made from any convenient material, for example metal or a synthetic plastics material.

Preferably the housing is provided by with a casing which covers the rear face of the mirror lens and which is provided with means to receive a mounting.

The mirror lens can be any convenient shape, for example concave, convex or flat and is conveniently of the polycarbonate unbreakable type or glass.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention can be performed in various ways but one embodiment will now be described by way of example and with reference to the accompanying drawings in which:

Figure 1 is a plan view from above of the vehicle rear view mirror according to the invention;

Figure 2 is a cross-sectional side elevation of the mirror shown in Figure 1 but with the mirror lens removed for clarity;

Figure 3 is a plan view from above of the mirror frame employed in the construction;

Figure 4 is a side elevation of the mirror frame shown in Figure 3;

Figure 5 is an end elevation of the mirror frame shown in Figures 3 and 4;

Figure 6 is a plan view from below of the mirror frame shown in Figure 3;

Figure 7 is a cross-sectional side elevation of the mirror frame on the line A-A of Figure 6; and,

Figure 8 is a cross-sectional end elevation on the line B-B of Figure 6.

DETAILED DESCRIPTION OF THE INVENTION

As shown in the drawings a vehicle rear view mirror according to the present invention

comprises a housing in the form of a casing 1 and mirror lens 2, which is only shown in Figure 1, and a frame 3 which is adapted to carry the mirror lens 2 and locate it within the casing 1.

The casing has a rim portion 4 within which the frame 3 is located and the frame is a resilient snap fit in the casing 1.

The frame 3 is provided with engagement means to resiliently engage retaining means in the casing 1, these engagement means comprising one or more abutments 5 which are adapted to be located behind one or more co-operating catches 6 which provide the retaining means on the casing 1.

If desired the abutments and catches could be provided as continuous ridges on the frame and casing but, as shown in the drawings, a series of abutments and catches can be provided. In the construction shown a single abutment and catch are provided at transverse ends of the frame and casing and two abutments and catches are provided on each of the sides.

The frame 3 and/or casing 1 can be made from any convenient resilient material, for example metal, but in the construction being described they are formed from a suitable synthetic plastics material which has inherent resilience.

The mirror lens 2 is a resilient snap fit in the frame 3, the frame 3 being provided with one or more inner abutments 7 which are adapted to retain the mirror lens 2 in place. The upper rim 8 of the frame 3 projects inwardly so that when the mirror lens 2 is snapped into place it is retained between the inwardly projecting rim 8 and the inner abutments 7. The inner projecting face of the rim 8 can be seen most clearly in Figure 6.

In the construction being described small slots 9 are provided at each corner of the frame which supply further resilience to the corners to assist assembly.

The casing is provided with a reinforced indented boss which is suitable suitably adapted to receive a mounting (not shown). The mounting can be of any convenient type suitable to allow adjustment of the mirror when in place.

In the construction described above the mirror lens is convex but it could be concave, flat or any other convenient shape. The present construction is particularly suitable for use with a mirror lens of the polycarbonate unbreakable type.

In order to assemble the construction it is necessary to press the mirror lens into place in the frame where it is retained by the abutments 7 and then press the frame into the housing or casing 1. The rear face of the mirror lens is protected and the frame can be removed from the casing by prising it out with a suitable instrument.

The present construction is light, easy to assemble and provides a rigid mounting for the mirror lens in the housing or casing 1.

CLAIMS

[see listing of claims starting on page 2 of the present Amendment]

ABSTRACT

Disclosed is a vehicle view mirror comprising a housing, a mirror lens and a location frame, said frame being adapted to carry said mirror lens and to locate it within said housing.
Preferably the frame is located within a rim of the housing and the frame can be a resilient snap fit.
The frame is provided with engagement means to resiliently engage retaining means on the housing.
The engagement means may comprise one or more abutments adapted to be located behind one or more co-operating catches which provide said retaining means on the housing.